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FREQUENCY OF CALCULOUS DISORDERS IN EGYPT.

MEDICAL writers have frequently committed the error of asserting that calculous diseases are unfrequent in warm climates. The statement is perhaps true as a general, but not as a universal rule. In Egypt they are of common occurrence, as appears from the report of M. Clot Bey, who has operated forty times for the stone since his residence in that country. Prosper Alpinus, in his treatise on the Diseases of the Egyptians, alludes to the frequency of urinary calculi; and attributes the predisposition to the irritation and weakness of the kidneys, induced by excess in venereal pleasures, and the more immediate cause of their formation to the sand in the waters which they drink. Most indeed of the patients are from among the inhabitants of Lower Egypt; a few, however, are from the more central division of the country. M. Clot has never seen a case among the Nubians or Abyssinians. The cause of this inequality, he thinks, may be found in the humidity of the air and the unwholesomeness of the water in Lower Egypt. The ground lies very low, and is frequently covered with stagnant muddy water, which is used by the lower orders as drink; the better classes have it previously filtered, and are thus more exempt from its injurious effects.

Egypt, like other countries, is infested with swarms of empirics who play on the credulity of the vulgar, by boasting of their infallible solvents for the stone. The people being ignorant and superstitious are easily duped by these charlatans, for every affection of the urinary organs is by them set down and treated as stone in the bladder; and no doubt many of the supposed cases (they never use a sound) get well under their treatment. There is another method sometimes employed by the Arabs, and that is, the forcible blowing of air into the bladder, and then sucking it out, while the hypogastrium is at the same time strongly compressed; the cunning dogs know full well that no stone can come out, and therefore conceal one in their mouths before they commence the suction; the patient is satisfied when he sees *a*, if not *the*, stone, and gratefully rewards the impostor. Lithotomy has however been long known and practised by the Egyptian surgeons. There are two methods in use; one

is the perineo-vesical, or nearly the Celsian—the other is the recto-vesical.

In both, two fingers of the left hand are carried deep into the rectum, in order to grasp and confine the stone, and to make it protrude as much as possible; a deep incision is then made directly upon it, and the fingers of the right hand are generally used as forceps to withdraw it. It must be acknowledged that very few patients die of the operation, although most of them afterwards labor under urinary fistulæ, or incontinence of urine.

The recto-vesical method is generally adopted; it is at once easy of execution; a large stone may be most conveniently withdrawn; and the risk of hæmorrhage is less than in any other. Many of the native lithotomists acquire great adroitness; they practise no other part of surgery; and the profession or trade is handed down from father to son, often for many generations.

The following is a translation of an old Arabic work, written eight centuries at least ago. "When you intend to extract a stone from the bladder, you should order a person to seize the patient under the shoulders, and then lift him up several times, shaking him heartily so that the stone may fall to the lowest part of the bladder. The patient should also be instructed to leap from a height, or to dance. He must then lie down, with his legs bent upon his thighs, and his hands secured below his knees, in order that the bladder may be protruded downwards. The operator is now to press forcibly upon the hypogastrium with the one hand, and with the other to examine the perineum if the stone can be felt. If he feels it, let him cut at once upon it; if he does not, one or two fingers are to be introduced into the rectum, to bring down the stone to the neck of the bladder, pushing it out to make it project; the assistant is now to keep the testicles up, and the surgeon is to cut between them and the anus, inclining the incision outwards to the left hip in an oblique direction, in order that the opening be large and proportioned to the size of the stone. If the finger in the anus be still kept pressing upon the stone, it will probably now leap out of itself; but if it does not, then an instrument is to be employed to extract it. The operation being finished, some yellow powder is to be sprinkled on the wound, a compress is to be applied to it, and then a bandage, which is called a 'bride.' The patient must lie on his back, and endeavor to make water whenever he has the desire, in order that it may not accumulate in the bladder, for this would retard the healing. He ought to wet the wound frequently with a lotion of vinegar and rose water. On the third day the bandage is to be removed, and the wound to be dressed with black ointment. If the parts become inflamed and swollen, they should be anointed with appropriate salves, and the aperture is to be bathed and injected with an infusion of chamomile, or with melted butter, and if God wills, the patient will recover."

Out of the thirty-eight cases of lithotomy performed by M. Clot, eleven were cured from the 7th to the 10th day after the operation; sixteen from the 11th to the 20th; eight from the 22d to the 30th; four from the 32d to the 40th; and one from the 40th to the 50th day. He

has lost only two patients, and three were discharged with vesico-rectal fistulæ.

The operator very modestly ascribes his great success to the fine climate of Egypt, which is favorable, he says, to the healing of all wounds; and also to the temperament and constitution of the people being little irritable and not easily excited. This remark had been previously made by many of the surgeons of the French expedition, and especially by Baron Larrey. In five of his cases M. Clot performed the recto-vesical operation; in three of these fistulæ remained uncured. He admits that the operation is exceedingly easy of execution, and that very large calculi may be conveniently extracted; but he has abandoned it for the rapheo-vesical method proposed by Vacca, and which he has performed eleven times; the stone is extracted at the most roomy part of the perineum; no important bloodvessel is exposed to the knife, and the rectum can with difficulty be wounded. The only serious objection which has been urged against it, is the danger of wounding the seminal tubes; but we should remember that they may be wounded in some of the other operations, and moreover that only one of them can be divided, the other remaining safe and perfect. Besides, may not a vas deferens, like any other tube, unite, after being cut across?—*Annales de la Medecine.*

MEDICAL IMPROVEMENT.—NO. XIII.

[Communicated for the Boston Medical and Surgical Journal.]

In concluding our remarks on the subject of these essays, we would observe that in every medical school there ought to be a course of lectures on Ethics. All the duties of a physician may be summarily expressed in one sentence—he must be an honest man. Honesty is merely a disposition to learn the truth, and to act according to its dictates, in every circumstance in which we are placed. It is scarcely possible to do any censurable or exceptionable act, which does not involve, directly or indirectly, a violation of truth, and infringe upon some promise expressed or implied. Knowledge is nothing more than information of the truth, or of the real state of things, and of their various relations, and the laws by which the Creator has designed that they should be regulated and governed. The physician has only to conduct himself as any man of integrity would do in his situation. By offering himself as a candidate to the public for their patronage, he has made a *profession* that he is worthy of it, and that he will do everything in his power to merit their confidence and approbation. By his profession, he has already declared that he has done all, according to his best ability, to fit himself for the all-important and trust-worthy situation which he has assumed. In other words, he declares that he has a good medical education.

Now, it is scarcely possible for any man of himself to know and think of all the duties which he has to perform. He must be taught. He must be reminded of the duties which he owes to himself, and of the relations in which he stands to others of the same employment, as well as to the public at large. All these compose a system of medical ethics, which is necessary to be learned, before a physician can fulfil the duties

which he has promised to perform, when he entered upon the profession. Hence the propriety of a course of ethical lectures.

The wares which the professional man carries to the public market, are talents, industry, learning, and integrity. It is presumed that he has talents, from his having been licensed by proper judges. If he possesses integrity, industry and learning follow as a matter of course. In so important a subject as medicine, in which life and health very greatly depend on the knowledge of the practitioner, any defect of information, which it was in the power of the physician to obtain, must necessarily impeach his honesty, and his sense of moral obligation, as a man. Instructors cannot too often inculcate this subject upon their pupils. They should, from the very first, impress on their minds that a professional man, who is ignorant of the duties of his calling, is a mere pretender and empiric, and as far as his deficiency extends, is as culpable as any other impostor. If anything in this world is a matter of conscience, it is where life and health are concerned. We are not here treating of a question of expediency; it is a matter of right that the public should demand all the learning which can possibly be brought to bear on the subject.

The minds of the young are tender, and very susceptible to moral truth, if the subject is only presented in such a way as to make an impression. It ought to be mingled in all their pursuits, and be considered as an essential part of professional instruction. Integrity and knowledge are as inseparable in medicine, as faith and works in theology. There can be very little approximation to perfection, without they both go together. These things should be fully explained to the candidates for the practice of physic, that they may deter the indolent, the giddy, and the rash, from attempting to assume so serious a profession. Such young men rarely think of studying theology. They are conscious of their moral defects, and feel that they would be impostors if they entered upon so holy a calling. They ought to be made equally sensible, that as great integrity, as much virtue, and as high a sense of moral obligation, are necessary to form a good physician, as a good clergyman. To increase the sum of human happiness is the business of both. The one profession is principally engaged in lessening moral, the other physical, evil. They both involve an equal degree of accountability, and are to be entered upon, with any prospect of true success, only by men of the highest integrity.

It is in vain, however, to expect to find everything exactly as it ought to be, in this imperfect world. While the present system continues, evil will always exist. It is a fact, that not only our principal employment, but our greatest happiness, consists in preventing, lessening, or removing, evil. It is almost the whole business of the life of a good man. Indolence and inaction are incompatible with happiness. Could we realize the golden age of the poets, or the millennium of some visionaries, we should have little to do. The splendid scenery with which we should be surrounded would soon become an insipid prospect, we should have very little excitement, and most of the inducements for exertion would be paralyzed. It seems, in this world of trial, that we were made for a constant struggle with vice, ignorance, and physical ills, and as soon

as one is overcome, a new one is presented. This keeps a benevolent man always active, and makes it necessary for him to be always learning how to act. It is in this constant succession of learning and acting, that his principal enjoyment consists. His great pleasure is in surmounting difficulties, and his constant trials are the main source of all his happiness. Evil is thus overruled to be the *occasion*, or indirect cause, of almost all the good that exists in this world. We have very few motives for action—and there can be little or no enjoyment, except in activity—that do not arise from a desire to overcome some present or anticipated evil, either of the physical or moral kind. A very essential part of this employment consists in subduing and restraining the evil propensities which every man finds lurking within himself, and which appear to be a part of human nature.

One of the most striking differences between a great and a small mind is, that the difficulties with which we are surrounded are apt to discourage and overwhelm the latter, while they stimulate the former and call all its resources into action. Though we are not to expect to arrive at absolute perfection, we may be constantly approximating towards it, and he who perseveres will make much farther advances than he first imagined were practicable. Whether a physician is eminently learned and highly useful, depends much upon circumstances. But these circumstances, in a greater degree than he usually supposes, are commonly within his control, and most of his misfortunes and deficiencies depend principally upon himself. If he has integrity, prudence, and industry, his merits will generally be sooner or later known, and his efforts respected and rewarded. Indeed, as has been often repeated, the efforts themselves, the mental exertions in which he is engaged, carry with them much of their reward, and constitute an important part of his enjoyment.

Nothing could contribute more to medical improvement, and tend to elevate the profession, than a suitable course of lectures upon ethics. The student would here find that duty, utility, and reputation, are inseparably connected, and all have a most intimate relation to his own happiness, as well as to the greatest welfare of others. Everything is harmonious and beautiful, when it is rightly done. In a good education, every faculty receives its due degree of cultivation. All our efforts should not be directed to the understanding alone, but the will and affections should have their share of discipline. These latter faculties, it is apprehended, are too often overlooked in a medical education. Where they are neglected, and suffered to run wild, the treasures of the understanding lose half their value, and are sometimes perverted to the worst of purposes. In no situation in life is it of more importance to have all the faculties of the soul duly balanced, and properly cultivated, than in the profession of medicine.

It is difficult to have a well-regulated mind, unless all its faculties are developed, by bestowing a proportional cultivation upon each. For this reason, the circle of sciences, which are regularly taught in the course of a liberal education, forms the best preparatory discipline for a professional education. The studies peculiar to medicine, are a continuance of the same mental discipline. But all these pursuits tend chiefly to the deve-

lopment and exercise of one class of faculties only—those of the understanding. It is equally necessary to cultivate, discipline, and improve the will and the affections, in order to have a well-regulated mind, adapted to all the exigences of life, according to the calling and situation in which we are placed.

It is manifest to every one, that the power and extent of the understanding, so far as regards practical utility, depend almost altogether upon the development and cultivation which they have received, in a regular course of discipline, during the process of a good education. Provided this development and cultivation are obtained, it is a matter of not much consequence to the community whether they were acquired at a public or private school, or their possessor is self-taught. It is also a fact equally important, though it is often overlooked and disregarded, that the will and affections are equally proper subjects of cultivation, and are equally necessary to be submitted to a regular course of discipline and habit. Every system of education, which does not have the latter in view, as much as the former, is necessarily partial, defective, and erroneous. Men cannot be truly great, unless they are truly good, and the most extensive knowledge and capacity lose most of their value and practical utility, when they are not directed by the strictest integrity and purest benevolence.

We must not only know our duty, but we must have a taste for it, and feel that while we are instrumental to the good of others, we are consulting the best means for our own happiness. In a word, if the moral standard of the profession in general were more elevated, it would insure the highest degree of Medical Improvement. S.

THE LAWS OF NATURE INVIOLABLE.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—The general rule which you have adopted, not to insert the marvellous medical stories which are published in the common newspapers, must meet with the approbation of all the considerate part of the profession. There may be exceptions, nevertheless, which will justify you in deviating from your usual course, and in noticing occasionally current reports, though they may not possess the direct sanction of medical authority. The case of supposed somnambulism at Springfield, which has been repeatedly mentioned in almost every gazette of the country, I consider as of this kind.*

There seems to be nothing very remarkable or unexampled in this case, except some peculiarities of vision. In several accounts, which have been inserted in very respectable papers, it is reported that the young woman, who is subject to the disease, in the paroxysm of somnambulism can read blindfold, when her eyes are bandaged so as to exclude the light, or when a book, or other substance impervious to light, is placed between her eyes and the writing. It is not, therefore, to be considered as merely an instance of excessively acute vision—as where a

* See Christian Register, page 4, Boston, Dec. 7, 1833, as well as many other of the most respectable gazettes of the day.

person has been known to read in a dungeon, from which nearly every ray of light is excluded—but as a case where the passage of light between the eye and the visual object is completely obstructed. All the marvellous part of the story turns upon this point.

There can be but little doubt of the fact that something of this kind has been *apparently* done; but upon a moment's reflection, it must be as evident to any man of common sense, as his own existence, that the experiment was not fairly made. There is certainly some very great error, either with the patient, her attendants, or the witnesses.

The morbid exaltation of the senses may be great, almost beyond conception. It would not be absolutely incredible, if an individual were found whose sight was so acute as to admit of his seeing Jupiter's satelites without a telescope. The story of the sentinel at Windsor Castle, who, in the silence of midnight, could count the striking of St. Paul's clock, may be true. In some instances of typhus, and in many nervous affections, either one or other of the senses has been known to become acute in the extreme. It perhaps generally happens, that when one of them is blunted, in a person whose general health is ordinarily good, one or more of the others, when in action, will be found to have acquired additional force, so as often to supply, in a great measure, the loss of the one that is defective.

In all these cases, however, the sense that acts inordinately, obeys the laws of its healthy function. It is the *degree* of its action only that is magnified, not its manner or kind that is altered. He who should pretend to taste with his toes, smell with his fingers, see with his ears, or hear with his eyes, would be immediately recognized, by every rational man, as an impostor. The reason is—that such a case would be a violation of the laws of nature. All the testimony in the world—a miracle which is designed to manifest the direct interference of the Deity, upon *a great and worthy occasion*, is of course excepted—would not, therefore, be sufficient to prove such a fact. There might be no doubt that the phenomenon was actually exhibited *in appearance*; but upon the very face of it, it would be a matter of certainty that imposition or error *somewhere* existed. In a philosophical point of view, the subject could not be worth a moment's consideration, any further than as a matter of curiosity to trace the source of such a delusion; and it would generally, no doubt, be found to stand on the same footing as any other piece of juggling.

It is not very rare in the annals of medicine, to meet with a severe disease and great imposition existing at the same time, in the same person. Ann More, the famous fasting woman, actually required less food to sustain life, than almost any other person ever known; but in pretending to have no other nutriment than air, she and her confederates were guilty of a gross and wicked imposture. There are also some cases of insanity, in which the patient does not lose the entire command of his will, but upon the points where he exercises it he is dexterous in the extreme, and performs feats of juggling which, for a time, may bid defiance to detection.

In the Springfield case, I have not the means of ascertaining, so far as to justify as a probable hypothesis, whether the fallacy depends upon

the credulity of the witnesses, the imposition of the attendants, or the craft of the patient, who may have dexterity enough to avail herself of a morbidly acute vision, so as to assume the appearance of seeing miraculously. There is error somewhere. The experiments can never have been *fairly tried*. It is the height of absurdity for any one to imagine, if an inch board, a book, or a bandage, has been so perfect as to prevent the transmission of light from the writing to the eyes of the patient, that she can read, unless by some species of legerdemain or trick. She must be assisted by mirrors, by a private signal, or by some such management. In the exhibition of the learned pig, I have in vain puzzled myself by the hour in endeavoring to detect the signal which the master gave to the animal. I failed in the attempt; but then, the failure, instead of convincing me that there was no deception, was additional proof of there being some very dexterous, though probably quite simple, illusion.

If we only should substitute a human being blindfolded, instead of the learned animal, and to add to this, if there should be an *unsuspected* confederate at the same time in the room, what limits could we set to the marvellous tricks that might be played?

If I recollect right, some of the feats ascribed to animal magnetism are equally absurd on the face of them; because, if it were possible that they could have been actually performed, they would have been deviations from the known and acknowledged laws of nature. They are, therefore, incredible, and in a philosophical point of view of no service, and deserve no investigation, except that it may be worth while, occasionally, to trace the ingenuity of the human mind, even in its tricks and impositions upon others. Every pretended deviation from the known laws of nature, in which there is not *an object of sufficient importance to presume a direct interposition of the Deity*, is absurd, and cannot be substantiated by any quantum of testimony. The rule of Horace will apply in all cases; there must be a *nodus vindice dignus*.

I wish not to be misunderstood. I have not the slightest suspicion that there is any collusion between the patient and her respectable physician. He is unquestionably a man of integrity and professional skill; and though his name is often mentioned, I have no evidence that any of the reports have his sanction, or that he is in the least responsible for the marvellous statements with which the public has been so much excited. Without some explanation, limitation, and qualification, I am confident he cannot sanction them. I have only thought it proper that some one should state the rules by which we are to judge of such wonderful stories. This is a suitable topic for a medical journal. Some of our knowledge, for all practical purposes, is absolutely certain. The common laws of optics are of this kind. *Where no light is transmitted from an object to the eye, there can be no vision of that object.* Every pretension to the contrary, from the nature of the case, is baseless. If the obstruction of the light is incomplete, the experiments are not accurately made, and are only specimens of morbidly acute vision.

Yours, very respectfully, THOMAS MINER.

Middletown, Conn. Dec. 16, 1833.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 1, 1834.

CONTINUATION OF DR. TYTLER'S ARGUMENT IN PROOF OF THE PRODUCTION OF CHOLERA BY THE USE OF RICE AS FOOD.

"The room was so fully attended this evening, that many of the members were unable to obtain seats. The disclosures made at the last meeting had excited a high degree of interest and curiosity. The statements made to-night materially increased the feelings awakened on the subject, and an extent of conviction was created in the minds of the audience, such as is rarely produced at so early a period in the development of novel statements before a scientific society. Nearly seventy gentlemen of the highest respectability and character were assembled; and amongst this large number, expressions of dissent to the views of Dr. Tytler came but from two gentlemen—with what degree of justice in those instances must be estimated from the report. In fact, the tribute of credence paid to Dr. Tytler's statements and views was very marked. Many individuals, we know, attended with a feeling that they should unequivocally oppose them; but scarcely a disbeliever left the room, if we might judge by the tokens of approbation elicited. He this evening resumed his narrative, and replied to some remarks (with more simplicity occasionally than force—the error of an unpractised debater), but time put an abrupt end to the comments, and Dr. Tytler, therefore, promised to attend next Monday to undergo such further interrogation as might be instituted by the meeting. We now give as full a report of the proceedings as possible.

Dr. Tytler (having first of all presented to the Society an arrow head which he had extracted from the left mastoid process of a Sepoy, who recovered from the accident) spoke thus:—I will now, gentlemen, proceed from the spot at which I left off last evening, when detailing the history of the disease in India. Having, as I told you, satisfactorily discovered the deleterious effects of the rice at Jessore, I was directed by general orders in Council, passed in Sept. 1817, to leave that district and proceed to the Upper Provinces, to take charge of the medical duties of the civil department of Allahabad. I did not, however, leave Jessore until the 22nd of October following, and it is an important fact, that while I was the first individual who saw a case of the disease in that district, so it fell to my lot to witness the first case which occurred, many months afterwards, at Allahabad, whence a new stream of the virus was poured, as from a new centre. The reason why it broke out in the latter station I will now describe. When I reached Allahabad, which was in January 1818, no disease of any description existed there, either amongst the European inhabitants or the natives residing within that populous city and its immense suburbs. Some time previous to that period the Upper Provinces (Allahabad included) became exhausted of their usual supply of food, in consequence of the quantities which were required there for the use of the troops in the field. To compensate for this deficiency the exportation of rice was encouraged by means of a bounty placed on its importation into the higher stations of India, and a supply of that grain was

at once directed to them from Calcutta. Now Allahabad was the first of those stations at which the bounty rice was landed. In my journey from Jessore I went to Calcutta, and thence to Allahabad, and it happened that the boats containing the rice were leaving Calcutta at the same time as myself. Consequently we were on the river together. But my boat outstripped the rice boats, and I reached Allahabad some time before the rice. I arrived there in the month of January, and found grain of all kinds exceedingly scarce. Even the worst and coarsest sort of rice was so scarce and dear in Allahabad, that the mass of the population could not purchase it. I forthwith went to the magistrate, and told him that the rice was on its passage, and informed him of my opinion of the effects it would produce when it arrived, should it be sold and consumed. Now observe; up to this time and on to February and part of March, not a single case at all resembling cholera had occurred. In Allahabad or its neighborhood cholera indeed was scarcely known even by name to the natives. But in March the arrival of the boats took place; their cargoes were landed, the rice got into the markets, and was everywhere sold, and exactly what I had told the magistrate would occur, and had warned the incredulous people against, took place. My cautions to them had no effect. They heard them with astonishment, and refused to attend to them, and thenceforth Allahabad became a second great focus for the dissemination of the disease. The first case which I witnessed there was that of a waiting woman, who was attached to the family of Mr. Henry Shakespear, the judge and magistrate. It occurred on the 21st of March, and I felt it my duty at once to announce it, and my opinions on the subject, in a letter addressed to one of the Calcutta journals, the *India Gazette*, in which paper it was published. Immediately after this the disease spread all over the town with a greater or less degree of violence, precisely as fresh supplies of rice arrived from Bengal, and was opened for sale in the bazaars. The disease at the same time made its appearance in all the neighboring villages, and in every part of the district to which the rice found its way. In six months ten thousand persons died in the environs alone of Allahabad. Yet, astonishing as it may seem, no injunctions could induce the inhabitants to desist from eating this poisonous food.—I now arrive at a point which requires that I should detail to you a most important fact. At my urgent suggestions, the rice was kept out of the jail of Allahabad. The magistrate prohibited in the strictest manner the sale of rice to the convicts; a little had already obtained admission, but the moment its further entrance was stopped, the disease, which had begun there in one instance, was checked, and not two persons died in that jail during the whole of the six months continuance of the disease in that city, though there were 700 prisoners within its walls; and this, too, at a time when the convicts worked in the very streets of a city which the disease was thus scourging. (Dr. Tytler here read a letter from Mr. Shakespear, the magistrate, fully attesting the truth of these statements.) Well, I continued five years in Allahabad, during the whole of which time no rice was admitted into the jail but what I personally approved of, and during which period it was entirely clear of cholera, though that was not the case in any other jail in India,—I will now proceed over the rest of the ground that I intend to travel at present, pretty quickly. But, previously, I will advert to one point which strikes me at this moment, and which refers to the year 1818. It has been said, and may be urged as an argument against me, that the disease was introduced into the Mauritius by the *Topaze* frigate. No statement,

however, can be more unfounded, or more pernicious in its consequences. The facts are these :—In the year 1818, the inhabitants of the Mauritius suffered greatly from destructive fires which occurred in the Isle of France. Feeling for their distresses, the merchants of Calcutta sent them, as a present, large quantities of the pernicious rice of 1817. It went from Calcutta to Port Louis, reached its destination in 1818, and came into use in 1819, and immediately the cholera broke out amongst the slaves of the island, who suffered tremendously. A committee of medical officers was immediately called by General Darling, who (probably from what he had seen in the Indian newspapers) directed their attention to the effects of rice as food. But they said that they had no reason to apprehend that the cause of the disease was in the food. No cause for the disease was, therefore, recognised by them. Of this committee, Dr. Burke, the present inspector-general of his Majesty's hospitals in India, was the president. Well, in 1830, I met Dr. Burke in Calcutta, and had an interview with him. He told me that he was particularly anxious to see me on the subject of the rice, and I accordingly laid before him the facts I had accumulated. He examined them carefully, said he was perfectly astonished at them, admitted that there could be no doubt as to the real cause of the disease in the Mauritius, said that my opinion had hitherto not been understood, gave me several facts and arguments in confirmation of the disease on that island having been produced by the rice sent from Calcutta, added that he considered my statements and conclusions to be of the utmost importance to medical science, that they were particularly valuable to medical officers in the charge of troops, and, finally, authorised me to state his opinions to this effect, in his name, to the Medical Society of Calcutta. I now revert to the point from which I deviated to state these facts.—In 1823 I left Allahabad, and reached Calcutta in the April of that year. On my arrival, I was examined by the Medical Board of that Presidency, with reference to the question before us, and for five hours was under interrogation respecting it. What was the result ? Why, the Board acknowledged that my facts were incontrovertible, and that my arguments thereon were valid ; but they came to the conclusion, that though the vitiation of the rice was so great, and produced such dreadful effects, it was an evil of too great magnitude to admit of a remedy—and there the matter ended. In October 1823, I reached Batavia, on my road to Bencoolen, I having been appointed chief-surgeon of Fort Marlborough, and here I come to the mention of some important facts which were furnished to me by Capt. Bowie, commander of the brig *Elizabeth*, showing the deleterious nature of the vapor arising from rice, on the crews of vessels, in the holds of which large masses of that grain are confined. The facts are contained in a letter, which was afterwards published in the Calcutta *John Bull*, Dec. 1823. In this place I will take the opportunity of observing, that it has been remarked that I have not proved the disease in England to be the same as that in India. True, I have not, for I have seen no case here ; but I will tell you what are the symptoms of the disease in India, and it will be for you to say whether they are identical. The symptoms are the total absence of pulse, rigidity of the skin, and, as far as can be seen in a native, lividity of the nails, sinking of the eyes, collapse of the face, dreadful spasms of the limbs, particularly of the toes and legs, which the natives attempted to relieve by binding themselves tightly with ropes ; cold perspirations, and discharges of a whitish watery liquid from the stomach and bowels.

Mr. Dendy.—Was there any strangury—any suppression of the urine?

Dr. Tytler.—That was not noticed by me; but one case in which there was strangury is reported in my printed documents. On the 30th of November 1823, I reached Fort Marlborough, on the island Sumatra, and took charge of the hospital of convicts at Bencoolen, who were transported from India to that place. Sumatra produces large quantities of *laddang paddy*, or rice, which grows on the sides of hills without water. This *paddy* is consumed by the natives of Sumatra, while the *convicts* are fed with the rice from Bengal; and when I arrived the convicts were eating that particular kind of rice which I had discovered to possess deleterious qualities. The consequence was, that the hospital was filled with the most dreadful gangrene—a gangrene so horrible that I know not what to call it, which will adequately express the shocking nature of the disease. At my suggestion, Sir Stamford Raffles, of whom you must all have heard, ordered the diet to be changed, and a more nutritious and wholesome aliment was accordingly given out, the result of which was that the gangrene wholly disappeared. This was reported to the Bengal government.—I now skip on to the month of January 1832, at which time I had charge of the 50th Regiment of Native Infantry. That corps left Gorrukpore in Northern India, for Barrackpore at the Presidency of Calcutta; and, in consequence of the difficulty of carriage, I was under the necessity of sending my sick and the greatest part of the hospital stores to Calcutta, while the regiment itself was marching by land. When the regiment reached Chuprah, it was suddenly ordered into the field, in consequence of the *Cole* insurrection. I was thus placed in the most difficult situation that a medical man could stand in, having only a limited supply of medicine with me for an ordinary march. At Tikoo we were joined by a detachment of cavalry, and some European artillery. These troops, including the departure from Gorrukpore, marched several hundred miles through what is considered as the most unhealthy part of India—the very worst jungles of that country—and it was anticipated that the whole of the regiment, which was a very fine one, would perish in the wilderness, or fall victims before the campaign was completed. This march was accomplished between the 12th of January and the 1st of May, when the regiment was divided, and at that time only one Sepoy had died, and no cholera or pestilential disease raged amongst the troops. Yet the only precaution that I took during this tremendous march, was that of warning the Sepoys against the indiscriminate use of rice, while the expenditure of medicine in the campaign, under that caution, was literally nothing. After the regiment divided, the right wing, with which I was marching to Barrakpore, was again ordered into the field, in the Jungle Mehauls, and entered on a fresh campaign, against Gunga Naraini Sing, and the rebellious Chooars; but so little were the troops affected with sickness, that they reached Burrabazar on the 12th of May, 1832, and, on the morning of the 14th, though only 300 strong, defeated and dispersed Gunga Narain Sing's army, consisting of nearly 5000 armed Chooars, which suddenly attacked our camp on that day.—In June, the right wing of this regiment proceeded to Bancoorah, and was exposed to the whole of the rains in temporary huts. Yet no cholera made its appearance in those troops, although they were hutted close to the walls of the jail, where the cholera prevailed to an immense extent. This then was exactly the converse of what occurred at Allahabad, as I was now in charge of *the troops*, and another medical officer in charge of *the jail*. Mr. Cheek, the surgeon in charge of the jail, asked my opinion respecting

the existence of the cholera in his hospital. I pointed out to him the presence of the deleterious rice in his jail, and showed him the documents I have now shown you; and to prove to him that the disease was not contagious, I inhaled the breath of one of his worst cases. The consequence was, that Mr. Cheek recommended to the magistrate that an alteration should be made in the diet. It was thereupon changed, and the effect was, that the disease almost wholly disappeared during the time that the alteration in the food continued. These facts are proved by the documents I now hold in my hand for the inspection of any one who would like to peruse them.—This concludes the facts I will at present intrude upon you with respect to *India*; but before I leave the subject I will present some to you which occurred in other quarters. In August 1832 a fearful disease raged in the prison at Charleston in the United States of *America*, consequent on a change of diet amongst the prisoners, from potatoes to rice. The facts are these: on Friday the diet was changed, and on Sunday the jail-hospital was filled with patients. These facts are detailed in the *Columbia Sentinel*, which is now before you.—In 1832 the cholera prevailed very destructively in *Paris*, during which rice was distributed in charity by order of the municipal authorities. Here then the rice is traced to Paris, (where it must have been *before* the cholera broke out,) and in 1833 the same disease exists in London, and in the shops of this city the vitiated rice is selling at the rate of three halfpence a pound. I maintain, then, that my opinion is based on as solid grounds as any ever delivered in medicine. If, unfortunately, I have failed to produce conviction in your minds, as the facts are certain, it is rather because I am not equal properly to place them before you, than from any deficiency of weight on their part, or want of intelligence on yours. If such should be the case, the blame must wholly rest with myself.—I have now only one thing more to explain, and that is, the mode in which the diseased rice is brought into this and other countries. Previous to the year 1813, the trade between India and Britain was solely in the hands of the East India Company, whence it was called 'the Company's monopoly,' and the revenues of India being entirely in the hands of the Government (that is, the Company), only the best articles of produce were exported from India; for the producers did not find with the Government any sale for the refuse produce of their lands. It was not the interest of the Company to trade in bad articles. Hence the rice *exported* under the Company's monopoly, was the best that could be procured. Hence, also, the Bengal rice then possessed a high reputation in Europe. But, in 1813, the whole state of commerce became changed. The trade with India was suddenly thrown open by the modification of the Company's charter by the Parliament of Great Britain; and from that event must be dated the exportation of bad rice from India into Europe. The free ships which reached India in 1814, 15, and 16, were supplied with cargoes of rice which had been accumulating in the markets of Calcutta from want of a sale for it. Now, in 1817, the rice crops, injured by the following causes, were reaped:—1st. The grain was blasted by the unparalleled wetness of the season in which it was grown: and, 2ndly, it was cut before it was fully ripe. The reasons why it was so cut were these;—the necessities of the natives were very urgent before the harvest was ready, the crops of the preceding year (1816) having failed; and an encouragement was given by the allowance of the bounty I have before mentioned, to reap too soon, in order that the owners might send the grain for sale into the Upper Provinces. In 1818, an Act of Parliament was passed, opening

the trade direct between India and the ports of the Mediterranean, and immediately an immense quantity of the rice of 1817 was exported into Gibraltar, Malta, &c., whence it got to Cadiz, and the result was, the well-known disease which broke out amongst the Spanish soldiers in 1819. It produced so dreadful a pestilence in that army, as almost to destroy it. Since then, a market has been found in Europe for the *refuse* of the rice crops of India, which did not previously exist, as it is the object of the free traders to buy cheap, that a ready sale may be obtained, while it is a great object with the natives of India to sell the traders whatever is not disposable in India. Annually, an immense quantity of rice is grown, which used to be considered so bad in India, that it was thrown into the rivers. That rice is now saved, and is brought over in vast loads to Europe, and sold and used as food. Almost every grocer's shop in England contains it, and it has become a common food with the pauper population of this country. From Britain, quantities of it are carried to the continent, besides which it is carried direct from India to France in French bottoms. It is taken to Trieste, whence it finds its way over Germany, and is carried through the Bosphorus into the Black Sea to Odessa, whence it is conveyed all over Russia; and as land carriage is excessively dear in India, and water-carriage comparatively cheap, immense quantities of this rice are carried to Batavia and other ports of the eastern islands, where it is embarked on board of Dutch and Hamburgh bottoms, and thus makes its way into innumerable other ports of Europe. Hence, by means of the free trade, and the peace which succeeded the battle of Waterloo (for it was that, don't you see, which opened the continent), a market has been found for the very worst descriptions of rice, which was not in existence anterior to the year 1813. The disease and the free trade therefore unhappily accompanied each other.—Such, gentlemen, is the outline of the events on which my opinions are founded. I could easily fill it up at great length, but this I refrain from doing, for it may be perfectly clear to you without. If, however, any part is doubtful or obscure, I will endeavor to explain it on an intimation to that effect. I have at present only to return you my grateful thanks for the attention and liberality I have experienced during these two nights. Gentlemen, if the Napoleons and Nicholases of the age are to be handed down to posterity as destroyers of the human race, shall not this Medical Society receive its share of commendation for preventing further slaughter through this dire pestilence? This you will have done, by allowing a perfect stranger to come before you, whose only claim was his avowal that he had truth to declare. You have listened to that truth with a degree of liberality, which, I will not say, is unparalleled, but never surpassed by any body of men whatever; and while I return you my personal acknowledgments, I feel that I stand upon higher ground, and avow that I am proud to belong to a profession which can boast of men, who, without prejudice, can come to the investigation of a novel question as the members of the London Medical Society have done.—*Loud and general applause.*"

BLEEDING.

Of all which has been written on the subject of bleeding, we know of nothing which better deserves attention, or which combines more practical good sense within the same compass, than the following remarks of Celsus. We give it in our own translation, which will probably do very imperfect justice to the merits of the original.

Bleeding from a vein is not a new practice ; but it is a new suggestion that there is almost no disease in which it may not be employed. To practise bleeding in young subjects and on women not pregnant, has always been common ; but to attempt it in children, in old men, and in women during gestation, is not so. The ancients held that the two extremes of youth and age were equally incapable of enduring this kind of treatment, and were persuaded that a pregnant woman so treated would miscarry. But experience has since shown that these rules are not without exception, and that more precise observations must be made in order to determine the propriety of the practice in a given case. The point is not so much what the age may be, or what the state of the uterine function, as what is the amount of strength. If debility be present, although the subject be young, or a woman not pregnant, the operation will do harm ; for the vital force being already reduced, a farther diminution may cause total failure. On the other hand, a vigorous boy or robust old man may be bled with safety. Still, in regard to such subjects an unskilful physician may be deceived, because for the most part they possess less power of endurance ; and a pregnant woman after her cure, will need strength for sustaining both herself and her infant. Nor should this principle be rejected because it requires skill and judgment in its application, or calls into exercise that sagacity which is not satisfied with counting the years or ascertaining the uterine state, but estimates the strength, and from this estimate determines whether that amount will be left which will sustain the boy or the old man, or the double life of the pregnant woman. There is great difference between strength and obesity, between leanness and debility ; the lean body may abound in blood, as the fat does in flesh. The lean, therefore, bear the abstraction of blood well, while the fat suffer from the evacuation ; so that the strength must be judged of by the state of the vessels, and not from the size of the person. Not only are these things to be considered, but likewise the nature of the disease ; whether it consists in redundancy or deficiency, whether the substance is corrupt or sound. For if the substance is deficient or is sound, bleeding will do harm ; if redundant or corrupt, no remedy is preferable. A violent fever, therefore, with tumid veins and a flushed surface, requires venesection : also diseases of the viscera and apoplexy ; choking of the fauces with difficulty of breathing from any cause, sudden suppression of the voice, intolerable pain, and any inward rupture or bruise from any cause ; also a bad habit of body, and all acute disease which, as observed above, injure not by debility but by oppression. It may so happen that while the disease needs the depletion, the body may not be in a state to bear it ; but if there appears no other prospect of relief, and the patient must die unless saved by a fortunate act of temerity, it will be the physician's duty to state that there is no hope without taking blood, and to confess how much danger there is in performing this; and then, if required, to bleed. In such a case there can be no doubt which is the proper course ; for a doubtful remedy is better than none. This measure is particularly required when apoplexy has taken place ; when one has suddenly become dumb ; when he is threatened with strangulation ; when a previous attack of fever has almost proved fatal, and another seems about to succeed, and the strength of the patient appears unequal to sustain the contest. As respects avoiding the operation during the digestive process, even this is not universal ; for the case will not always allow to wait for the completion of this process. If, there-

fore, the patient has suffered a severe fall, has been bruised, from any accident has vomited blood, although he may just before have taken food, the amount of circulating fluid must be lessened, lest by local determination it threaten the welfare of the system; and the same may be said of sudden cases of threatened strangulation. But if the nature of the disease allow of delay, it may be deferred till digestion is wholly completed, and therefore the second or third day of disease seems preferable for its employment. But as it is sometimes necessary to take blood on the first day, so is it never useful after the fourth, when by the process of time the blood has diminished, or has already affected the system so that the depletion may weaken the body but cannot restore it. But if a violent fever is setting in, to take blood at its very onset is to murder the patient; a remission must be waited for; if it does not decrease, but ceases to increase, and no remission can be expected, the opportunity, such as it is, must be availed of. When needed, the operation must often be divided between two days, for it is often better first to relieve the patient and then to evacuate him, than to take the risk of inducing prostration by reducing him at once. If this precaution is needed in removing the matter of an abscess or anasarcous effusion, how much more in taking blood!

Blood should be taken, when the disease is general, from the arm; when local, from the part itself, or as near to it as possible; since we are limited to certain convenient places, as the arm, foot, temple. I am aware that it is recommended by some to take the blood from a part the most distant from the seat of disease, because in this mode the blood is drawn away from that part, whereas in the other its course is directed into it. But this is a false principle, for the operation first empties that part from which it is drawn; from those more distant the blood follows just as long as it continues to be drawn; when the operation ceases, this derivation ceases with it. Still experience seems to show that when the head is injured, the blood is most conveniently drawn from the arm; if the disease be in one shoulder, from the opposite arm: the reason of this may be that if any accident happens, those parts will be more likely to suffer which are already weakened. The course of the blood is actually diverted in some cases, when it is drawn from one part while flowing from another. In this case by making astringent applications and offering it another channel, the morbid flux is arrested.—When the blood is flowing, it is proper to notice its color and consistence. If thick and dark, it is of bad character, and therefore withdrawn with advantage; if red and bright, it is healthy, and its emission, as it can do no good, may be injurious, and should therefore be arrested. But this cannot happen to the physician who can discriminate that state of body which requires the operation.

Whole number of deaths in Boston for the week ending December 27, 31. Males, 19—Females, 19. Of scarlet fever, 3—consumption, 5—paralysis, 1—typhous fever, 3—unknown, 2—infantile, 3—inflammation of the bowels, 2—child-bed, 2—dropsy, 1—intemperance, 1—worm fever, 1—accidental, 1—old age, 1—croup, 1—inflammation of the lungs, 1—lung fever, 1—inflammation of the brain, 1.

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